

February 2016
M. Sc. Ist Semester Examination

PHYSICS
Paper IV Electronic Devices

Time 3 Hours)

(Max. Marks : Regular 85 / Private 100

Note : This question paper is meant for all Regular and Private students. Answer all five questions. All questions carry equal marks. The blind candidates will be given 60 minutes extra time.

1. (a) Describe working of MESFET.
(b) Explain IV characteristics of JFET.

OR

- (a) What is the difference between Tunnel Diode and p-n junction diode? Explain IV characteristics of Tunnel Diode.
(b) Explain IV characteristics of MOSFET.

2. (a) Explain the importance of population inversion for lasing action.
(b) Describe working of diode laser.

OR

- (a) Describe working of solar cell.
(b) Describe working of diode photo detector.

3. (a) Explain working of PROM.
(b) Explain working of CMOS.

OR

- (a) Describe working of CCD.
(b) Describe working of HDD

4. (a) Explain magneto-optic Kerr effect.
(b) Explain piezo-electric effect.

OR

- (a) Explain electrostrictive effect and describe one of its applications.
(b) Explain magnetostrictive effect and describe one of its applications.

5. Write short notes on any two of the following :

- (a) Impatt Diode.
(b) LDR.
(c) CD ROM.
(d) Acousto-optic Effect.
(e) NMOS.